

Remarks/Arguments:

Applicants amend the specification to claim the priority date of the parent application to this application.

Applicants again thank Examiner Potter for his careful examination of this application and his clear explanation of the claim rejections. In response, applicants cancel claim 1-16 and amend claim 17 to describe the invention more clearly and to overcome the §103 rejection. Applicants also insert new claims 18-22, which are fully supported in the original specification and the original drawing figures.

As amended, claim 17 has additional limitations:

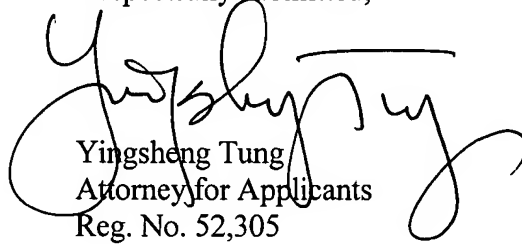
1. the bonding pads covering the vias;
2. a solderable metal member within the vias forming the bottom surface of a solid column of conductive material, the column filling the via and connecting the metal pattern, and
3. a solder ball extending into a via from the second surface, contacting the solderable metal member at an end of the solid column.

As noted in the Office action, AAPA does not disclose the solderable material in the via and the Geng patent teach a copper plated cylinder that can extend through the PCB. However, the Geng patent does not teach a bond pad that covers the via; it does not teach a solderable metal member forming the bottom surface of a solid column of conductive material, which fills the via; it does not teach a solder member at an end of the solid column. Because the limitations associated with the solderable material and the conductive solid column are not disclosed in either AAPA or the Geng patent, AAPA and the Geng patent do not render claim 17 obvious; and claim 17 and its dependent claims 18-22 stand patentable over the references.

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Reply to Office action of Feb. 25, 2005

Applicants respectfully submit that this application is in allowable form and request further examination of this application and timely allowance of all pending claims.

Respectfully submitted,



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